



[A short jumping break can help kids build strong bones, researchers say. \(ABCNEWS.com\)](#)

Bounce at the Bell

Researchers: Kids Can Build Bone Strength by Simple Exercise

By [John McKenzie](#)



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— The General Brock School in Vancouver looks like any other elementary school. Until the bell sounds.

About 30 sixth-graders then stand beside their desks and begin to jump. Not for long. Just a few seconds. But scientists now say that can be enough to build stronger bones.

Karen Chalmers, the principal, was skeptical at first.

"Initially my first reaction was, 'Oh, come on. That little bit of time will make that big a difference?' " said Chalmers. "But they gave us the statistics and research, and the research says it makes a difference."

Stronger Bones Could Prevent Osteoporosis Later

Professor Heather McKay at the nearby University of British Columbia had conducted a pilot study that followed almost 100 students. The children had similar eating habits and physical activity levels. The only difference was that half of them jumped at the bell (just five jumps, three times a day) and half of them did not jump.

McKay used X-rays to measure the bone mass of each child at the start of the study and again eight months later. She found that those who had jumped actually built 3.2 percent more bone mass in the hip region of the body than the other children. That could be enough to postpone, or perhaps even prevent, osteoporosis later in life.

"We're talking about these children gaining in eight months what we would see women lose in three years around menopause," McKay told ABCNEWS.

Research has shown that while running is good for the cardiovascular system, jumping or high-impact exercise is best for building bone.

When a child runs, for example, every time his foot hits the ground, the skeleton absorbs a force of about twice the youngster's body weight. But jumping exerts a much greater force, about five times the child's body weight.

That causes the bone to bend ever so slightly, and triggers the bone's building cells to turn on.

"The key is that there is a higher-than-usual impact applied to your bones," said McKay.

It's also crucial that the impact occur regularly during childhood, the critical period for bone development. Twenty-six percent of all the bone you will ever develop is formed during puberty: 10 to 12 years of age for girls, 12 to 14 years of age for boys.

Today, the "Bounce at the Bell" program has been introduced in six Vancouver schools.

"It takes no money to run the program," said McKay. "It takes no special training, and we're talking about an investment of about a minute and a half a day."

It also provides some unintended benefits. Ernest Wong, a sixth-grade teacher at the school, said: "For the hyper kids, it tends to calm them down, and for the kids who perhaps didn't get enough sleep, it tends to pick them up with some energy." ■